

TABLE R 408.31072(1)
DEFAULT GLAZED FENESTRATION U-FACTORS

FRAME TYPE	SINGLE PANE	DOUBLE PANE	SKYLIGHT	
			Single	Double
Metal	1.2	0.8	2	1.3
Metal with thermal break	1.1	0.65	1.9	1.1
Nonmetal or metal clad	0.95	0.55	1.75	1.05
Glazed block	0.6			

TABLE R 408.31072(2)
DEFAULT DOOR U-FACTORS

DOOR TYPE	U-FACTOR
Uninsulated metal	1.2
Insulated metal	0.6
Wood	0.5
Insulated, nonmetal edge, max 45% glazing, any glazing double pane	0.35

TABLE R 408.31072(3)
DEFAULT GLAZED FENESTRATION SHGC

SINGLE GLAZED		DOUBLE GLAZED		GLAZED BLOCK
Clear	Tinted	Clear	Tinted	
0.8	0.7	0.7	0.6	0.6

TABLE R 408.31073(1)
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a

CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT ^b U-FACTOR	GLAZED FENESTRATION SHGC	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE	FLOOR R-VALUE	BASEMENT ^c WALL R-VALUE	SLAB ^d R-VALUE AND DEPTH	CRAWL SPACE WALL R-VALUE
1	0.35	0.60	NR	38	19 or 13 +5 ^f	13	30 ^e	10/13	10, 2ft	10/13
2	0.35	0.60	NR	49	19 or 13 + 5 ^f	15	30 ^e	10/13	10, 4ft	10/13
3	0.35	0.60	NR	49	21	19	30 ^e	10/13	10, 4ft	10/13

- R-values are minimums. U-factors and SHGC are maximums, R-19 insulation shall be permitted to be compressed into a 2 X 6 cavity.
- The fenestration U-factor column excludes skylights. The solar heat gain coefficient (SHGC) column applies to all glazed fenestration.
- The first R-value applies to continuous insulation, the second to framing cavity insulation; either insulation meets the requirement.
- R-5 shall be added to the required slab edge R-values for heated slabs.
- Or insulation sufficient to fill the framing cavity, R-19 minimum.
- "13+5" means R-13 cavity insulation plus R-5 insulated sheathing. If structural sheathing covers 25% or less of the exterior, R-5 sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25% of exterior, structural sheathing shall be supplemented with insulated sheathing of at least R-2.

TABLE R 408.31073(2)
EQUIVALENT U-FACTORS

CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT U-FACTOR	CEILING U-FACTOR	FRAME WALL U-FACTOR	MASS WALL U-FACTOR	FLOOR U-FACTOR	BASEMENT WALL U-FACTOR	CRAWL SPACE WALL U-FACTOR
1	0.35	0.60	0.030	0.060	0.082	0.033	0.059	0.065
2	0.35	0.60	0.026	0.060	0.060	0.033	0.059	0.065
3	0.35	0.60	0.026	0.057	0.057	0.033	0.059	0.065

- Non-fenestration U-factors shall be obtained from measurement, calculation or an approved source.

TABLE R 408.31073(3)
STEEL-FRAME CEILING, WALL AND FLOOR INSULATION (R-VALUE)

Wood Frame R-Value Requirement	Cold-formed Steel Equivalent R-Value ^a
Steel Truss Ceilings ^a	
R-30	R-38 or R-30 + 3 or R-26 +5
R-38	R-49 or R-38 +3
R-49	R-38 + 5
Steel Joist Ceilings ^b	
R-30	R-38 in 2 X 4 or 2 X 6 or 2 X 8 R-49 in any framing
R-38	R-49 in 2 X 4 or 2 X 6 or 2 X 8 or 2 X 10
Steel Framed Wall	
R-13	R-13 + 5 or R-15 + 4 or R-21 + 3
R-19	R-13 + 9 or R-19 + 8 or R-25 + 7
R-21	R-13 + 10 or R-19 + 9 or R-25 + 8
Steel Joist Floor	
R-13	R-19 in 2 X 6 R-19 + R-6 in 2 X 8 or 2 X 10
R-19	R-19 + R-6 in 2 X 6 R-19 + R-12 in 2 X 8 or 2 X 10

For SI: 1 inch = 25.4 mm.

- Cavity insulation R-value is listed first, followed by continuous insulation R-value.
- Insulation exceeding the height of the framing shall cover the framing.